

City of Kirkland
Reviewed by AHaupt
07/12/2016

ORS

CHANICAL CONTRACTC
TREET Tel: 206-762-1960

COMPLETE MECHAN 430 SW 153rd STREET

KIRKLAND PARK PLACE BLDG. D PENTHOUSE FREEZE PROTECTIO 401 PARKPLACE

M-1.0

SHEET NO.

PERMIT ONLY - NOT FOR CONSTRUCTION

- 1. THE FOLLOWING NOTES APPLY TO ALL MECHANICAL DRAWINGS. ADDITIONAL MECHANICAL NOTES MAY BE INDICATED ON EACH MECHANICAL DRAWING. SEE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
- 2. REFER TO ARCHITECTURAL AND STRUCTURAL DRAWINGS FOR GENERAL CONSTRUCTION INCLUDING, LOUVERS, CONCRETE EQUIPMENT PADS FLASHING DETAILS, ETC.
- 3. REFER TO ARCHITECTURAL DRAWING FOR ROOM ELEVATIONS. LOCATE MECHANICAL DEVICES SUCH AS TEMPERATURE SENSORS, HUMIDISTATS, PANELS, ETC. SO THAT THEY DO NOT CONFLICT WITH GENERAL CONSTRUCTION (WAINSCOT, DOOR HARDWARE, ETC.) NOR WITH ELECTRICAL SYSTEM (LIGHT SWITCHES, SPEAKERS, OUTLETS, ETC.).
- 4. MECHANICAL DRAWINGS SHOW APPROXIMATE LOCATIONS FOR GRILLS AND DIFFUSERS. FIELD COORDINATE ACTUAL LOCATIONS BY REFERRING TO ARCHITECTURAL DRAWINGS, REFLECTED CEILING PLANS, AND OTHER CEILING OR SURFACE MOUNTED DEVICES PLANS. EXISTING HVAC EQUIPMENT SHALL REMAIN IN PLACE UNLESS OTHERWISE INDICATED ON DRAWINGS. FIELD VERIFY EQUIPMENT CONDITION AND FUNCTION AND NOTIFY OWNER IN THE EVENT THAT COMPONENT OR UNIT REPAIR OR REPLACEMENT IS REQUIRED TO MEET THE PEROFMANCE CRITERIA INIDCATED ON
- 5. FIELD VERIFY THAT ALL EXISTING DUCT DIMENSIONS CONFORM WITH ENGINEERED DRAWINGS. IN THE EVENT THAT THE ACTUAL DUCT SIZE DOES NOT MATCH DESIGN, THE DESIGN SIZE SHALL TAKE PRECEDENT.
- 6. GENERALLY DUCTWORK PLANNED TO BE TIGHT TO STRUCTURE WITH PIPING BELOW DUCTWORK AND BETWEEN LIGHT FIXTURES. ADJUST AS NECESSARY.
- 7. VERIFY THAT LOCATIONS OF MECHANICAL EQUIPMENT AND DUCTWORK TO PROVIDE CLEARANCES OVER LIGHTING FIXTURES FOR REMOVAL AND SERVICE ACCESS DUE TO EQUIPMENT
- 8. ARRANGE HVAC EQUIPMENT SO THAT ACCESS CLEARANCES INDICATED BY DRAWINGS, REQUIRED BY CODES, AND RECOMMENDED BY MANUFACTURER ARE PROVIDED
- 9. WHERE NECESSARY, PROVIDE ACCESS PANELS/DOORS IN DUCTWORK AS INDICATED FOR INSPECTION AND MAINTENANCE FOR ALL SMOKE/FIRE DAMPERS.
- 10. GENERAL CONTRACTOR SHALL PROVIDE ACCESS TO FIRE AND/OR COMBINATION FIRE/SMOKE DAMPERS THROUGH ACCESS DOORS IN HARD CEILINGS AND WALLS. WHERE ACCESS DOORS PENETRATE FIRE RATED SYSTEMS THEY SHALL BE RATED IN ACCORDANCE WITH IBC
- 11. REFER TO ELECTRICAL DRAWINGS FOR ADDITIONAL ELECTRICAL CHARACTERISTICS OF MECHANICAL EQUIPMENT (VOLTAGES, ETC).
- 12. ELECTRICAL CHARACTERISTICS OF LISTED EQUIPMENT SHALL BE FIELD VERIFIED BY THE CONTRACTOR. ANY ELECTRICAL CHARACTERISTICS THAT DEVIATE FROM THOSE SHOWN ON MECHANICAL EQUIPMENT SCHEDULES SHALL BE NOTED AND COOORDINATEDWITH THE ELLECTRICAL CONTRACTOR AS NECESSARY.
- 13. DRAWINGS ARE SCHEMATIC IN SOME AREAS AND MAY NOT SHOW OFFSETS WHICH MAY BE REQUIRED. PROVIDE OFFSETS AS REQUIRED AT NO ADDITIONAL COST.
- 14. REFER TO PIPING DIAGRAMS AND DETAILS (IF AVAILABLE) FOR REQUIRED FITTINGS, VALVES, ETC. FIELD VERIFY CONDITION, SIZES AND ROUTING OF EXISTING PIPING TO EXISTING UNITS.
- 15. DUCTS AND PIPES INDICATED WITHOUT DIMENSIONS SHALL BE SIZED PER PRECEDING UPSTREAM DUCT AND PIPE SECTIONS
- 16. DUCTWORK SIZES SHOWN ARE CLEAR INSIDE DIMENSION
- 17. IF REQUIRED FOR INSTALLATION OF PIPES, DUCTS, AND EQUIPMENT, PROVIDE ADDITIONAL STRUCTURAL MEMBERS BETWEEN COLUMNS, JOISTS, AND STRUCTURAL FRAME TO MEET SUPPORT REACTIONS (FORCES, MOMENTS, AND DEFLECTIONS). STRUCTURAL MEMBERS SHALL BE DESIGNED BY A REGISTERED PROFESSIONAL ENGINEER.
- 18. DO NOT CORE DRILL OR DRILL THROUGH BEAMS, COLUMNS, AND SHEAR WALLS, UNLESS INDICATED ON STRUCTURAL DRAWINGS OR AS APPROVED BY THE STRUCTURAL ENGINEER.
- 19. PROVIDE DUCT LINING FOR THE FOLLOWING DUCTWORK:
 - A. ALL AIR TRANSFER DUCTS AND CEILING RELIEF GRILLS B. ALL SUPPLY, MIXED AIR AND EXHAUST AIR PLENUMS CONNECTED DIRECTLY TO EQUIPMENT C. ALL OUTDOOR AIR DUCTS OR PLENUMS
- 20. ON ALL EXTENDED PLENUMS CONECTED TO A DISCHARGE OUTLET ON A SUPPLY AIR DEVICE SUCH AS A WATER SOURCE HEAT PUMP, FAN COIL UNIT, FAN POWERED VAV TERMINAL, PROVIDE 1" THICK INTERIOR ACOUSTICAL LINER IN THE FIRST 4 FT. OF LGTH. NO TAP-INS SHALL OCCUR IN THIS SECTION
- 21. PROVIDE A VOLUME DAMPER FOR EACH SUPPLY BRANCH, RETURN BRANCH (DUCTED ONLY), & EXHAUST BRANCH WHERE THREE OR MORE OPENINGS ARE ASSOCIATED WITH THE BRANCH, AND ELSEWHERE AS NOTED ON THE DRAWINGS OR IN SPECIFICATIONS
- 22. DUCTWORK STATIC PRESSURE AND SEAL CLASS, BASED ON SMACNA STANDARDS
- 23. REFER TO WASHINGTON STATE NREC COMPLIANCE REQUIREMENTS ON DRAWING SCHEDULE SHEETS FOR ADDITIONAL MECHANICAL PROVISIONS
- 24. PROVIDE ECONOMIZERS IN ACCORDANCE WITH WSEC (2012) AS PER: CHAPTER 4 SECTIONS C403.3.1 AND C403.4.1 UNLESS NOT REQUIRED AS PER WSEC CODE EXCEPTIONS
- 25. SEAL DUCT AND PLENUM IN ACCORDANCE WITH WSEC (2012) AS PER: CHAPTER 4 SECTION
- 26. BALANCE HVAC SYSTEM IN ACCORDANCE WITH WSEC (2012) AS PER: CHAPTER 4 SECTION C408 27. COMMISSION AND COMPLETE MECHANICAL SYSTEMS IN ACCORDANCE WITH WSEC (2012) AS
- PER: CHAPTER 4 SECTION C408
- 28. PROVIDE COMPLETION/RECORD DRAWINGS IN ACCORDANCE WITH WSEC (2012) AS PER: CHAPTER 4 SECTION C408
- 29. INSULATE DUCT AND PLENUM IN ACCORDANCE WITH WSEC (2012) AS PER: CHAPTER 4 SECTION
- 30. INSULATE PIPING IN ACCORDANCE WITH WSEC (2012) AS PER: CHAPTER 4 SECTION C403.2.8
- 31. PROVIDE THERMOSTATIC CONTROLS IN ACCORDANCE WITH WSEC (2012) AS PER CHAPTER 4 SECTION C403.2.4.1
- 32. ENSURE SETPOINT OVERLAP RESTRICTION IN ACCORDANCE WITH WSEC (2012) AS PER CHAPTER 4 SECTION C403.2.4.2
- 33. PROVIDE THERMOSTATIC SETBACK CAPABILITIES IN ACCORDANCE WITH WSEC (2012) AS PER CHAPTER 4 SECTION C403.2.4.3.1
- 34. EQUIP SHUTOFF DAMPER CONTROLS IN ACCORDANCE WITH WSEC (2012) AS PER: CHAPTER 4 SECTION C403.2.4.4
- 35. ENSURE VENTILATION IN ACCORDANCE WITH WSEC (2012) AS PER: CHAPTER 4 SECTION C403.2.5
- 36. PROVIDE DEMAND CONTROL VENTILATION IN ACCORDANCE WITH WSEC (2012) AS PER: CHAPTER 4 SECTION C403.2.5.1
- 37. ENSURE ELECTRIC MOTOR EFFICIENCY IN ACCORDANCE WITH WSEC (2012) AS PER: CHAPTER 4

GAS UNIT HEATER SCHEDULE HEATING BTU/H AFUE
 CFM
 VOLTAGE
 RLA
 WEIGHT
 NOTES

 100
 120-60-1
 .15
 19 LBS
 1
 MANUFACTURER AREA SERVED DESCRIPTION 99% PENTHOUSE NON-FREEZE APPLICATION BF10NTDG/NMDG UNVENTED GAS FIRED UNIT HEATER 10,000

1. FAN IS OPTIONAL, FIELD INSTALLED.

MUST REMAIN ON JOB SITE

HOURS OF WORK: 7AM TO 8PM MON-FRI

9AM TO 6PM SAT. NO WORK SUNDAYS &

HOLIDAYS (PER KZC SEC. 115.25)

Exceptions must be approved in

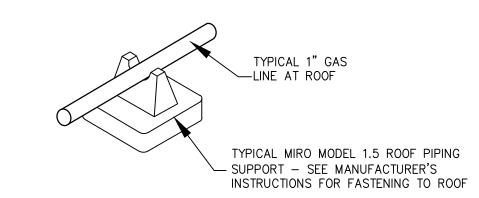
writing by Planning Official

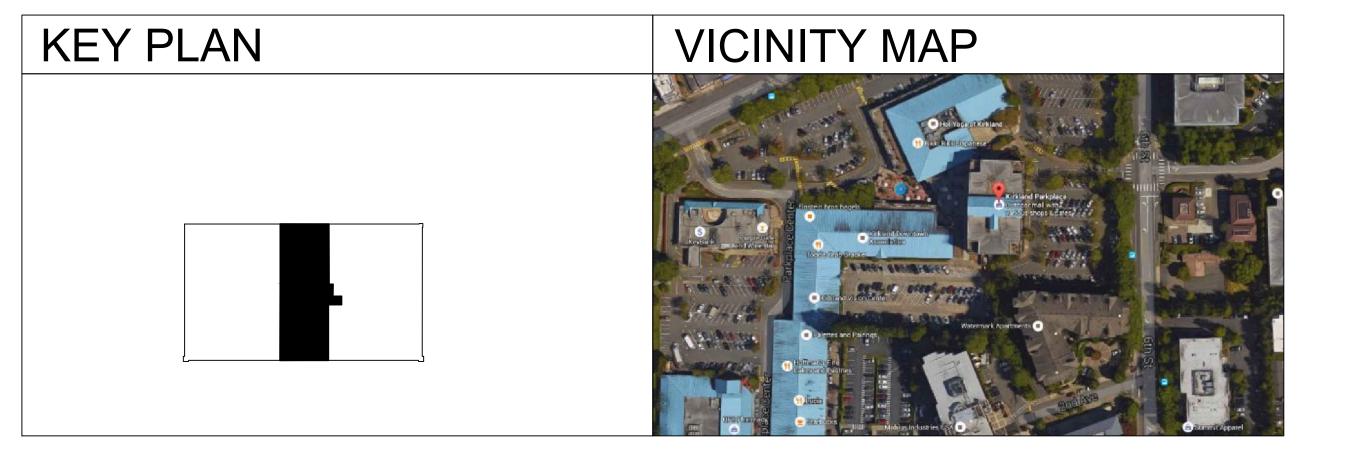
LOAD CALCULATIONS FOR UNHEATED SPACE

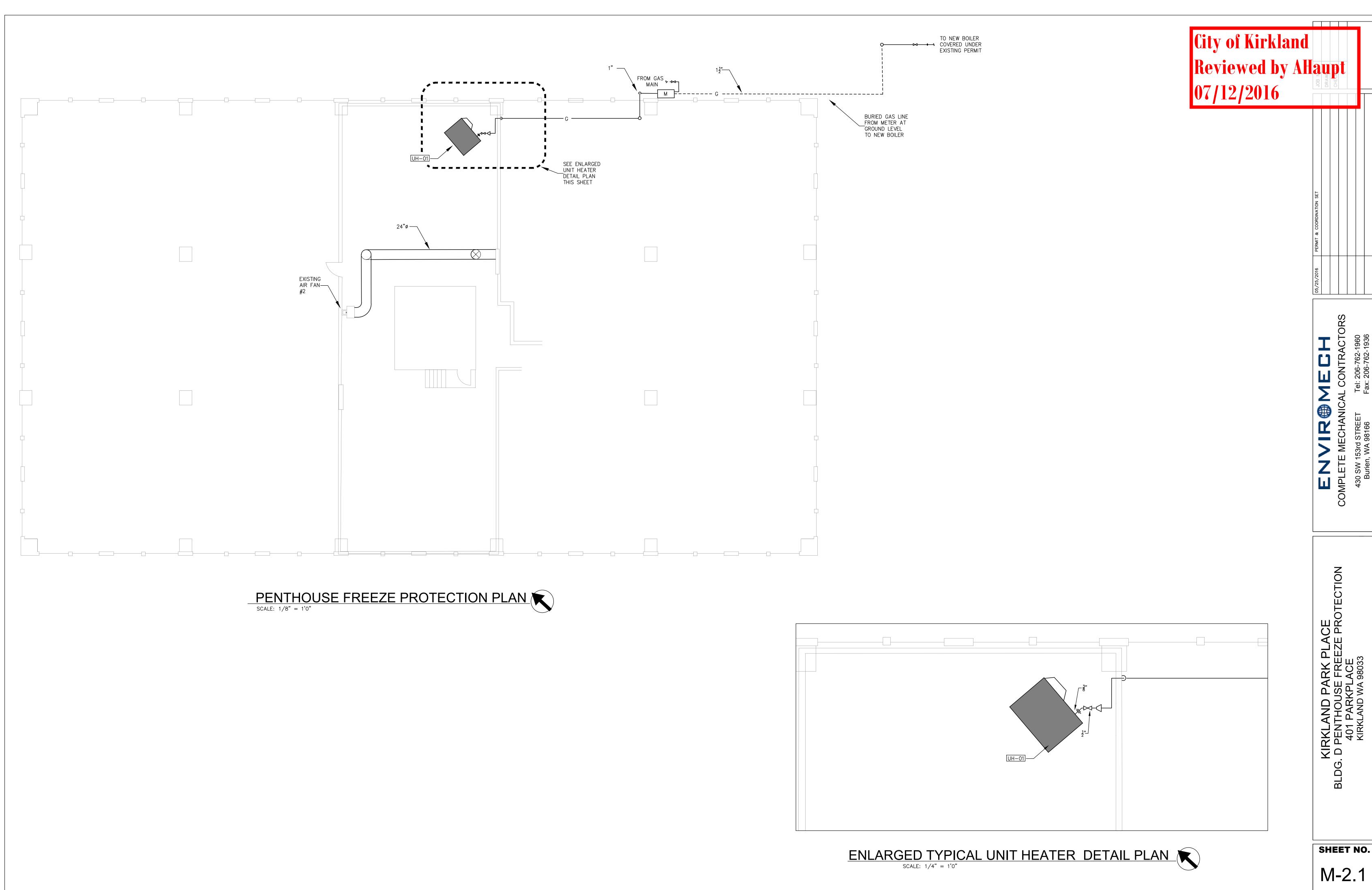
TOTAL SQ FT MAXIMUM BTU PER SQ FT TOTAL MAXIMUM BTU TYP UNIT HEATER OUTPUT

10000

ROOFTOP GAS PIPING SUPPORT DETAIL







M-2.1

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